

Please replace the paragraph beginning at page 1, line 11 with the following rewritten paragraph:

a1
Digital audio players are conventionally known which read compressed audio data on various signal memory media and expand and reproduce the audio data in the memory media. With the players, the data is recorded/reproduced at the bit rate of about 128 K bps, to produce fine quality sound. On the other hand, the development of digital technology in recent years provides various data storage media. Attention is directed to one of the media, IC memory card which is adapted to write and read data at a high bit rate of about a maximum of 8 Mbps.

Please replace the paragraph beginning at page 1, line 21 with the following rewritten paragraph:

a2
Digital audio players having an IC memory card for use as a data storage medium have been developed. In the digital audio players, data is written/read to an IC memory card at the bit rate of about 128 Kbps in conformity with the bit rate for decoding which is satisfactory with respect to sound quality. The power consumption of the IC memory card is generally constant during memory access regardless of the difference in the bit rate for data writing/reading.

Please replace the paragraph beginning at page 2, line 5 with the following rewritten paragraph:

a3
With the digital audio player having the IC memory card for use as the data storage medium, the use of a primary or a secondary battery as power source can realize its portability.

a³
However, the audio player of the portable type has a problem in that the player is endurable to be used within the limited period of time because the primary or secondary battery is limited in capacity.

Please replace the paragraph beginning at page 2, line 13 with the following rewritten paragraph:

a⁴
An object of the present invention is to provide a data reproduction device such as a digital audio player, etc., which has a memory card, and to prolong the period of time during which the player is endurable to be used by reducing its power consumption.

Please replace the paragraph beginning at page 2, line 24 with the following rewritten paragraph:

a⁶
The controller of the memory card is constructed such that an active mode is set wherein data is read out under current consumption at a first current value in response to memory access of data reading, and thereafter a standby mode automatically follows to wait for next memory access under current consumption at a second current value which is lower than in the first current value.

Please replace the paragraph beginning at page 3, line 14 with the following rewritten paragraph:

a⁶
With the data reproduction device of the present invention, when a user manipulates to

reproduce data, the control circuit repeats the operation to access the memory card, and to read out intermittently predetermined amount of data from the memory card at the first bit rate. The read data is stored in the buffer.

Please replace the paragraph beginning at page 4, line 23 with the following rewritten paragraph:

With the data reproduction device of the present invention, as described, because power consumed by the memory card for reading out all the data to be reproduced is a total value of the power consumption in both the active mode and the standby mode, the power consumption is reduced more than in the conventional case where the memory card is always accessed at the low bit rate which does not have a problem in data reproduction, to continue great current consumption.

Please replace the paragraph beginning at page 5, line 15 with the following rewritten paragraph:

A digital audio player embodying the present invention will be described below in detail with reference to the drawings. FIG. 1 shows that the digital audio player of the present invention can be loaded with a memory card 8 having a controller 9 mounted thereon. The audio player comprises a memory card controller 7 to control write/read of data to the memory card 8, a CPU 1 to execute various controlling operation like data reproducing in response to user's manipulation, a digital signal processing circuit DSP 3 to perform processing required for

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reproduction such as decoding, etc., on audio data read out from the memory card 8, a D/A converter 4 to convert digital audio signal obtained from the DSP 3 into analog audio signal, an amplifier 5 to amplify the audio signal obtained from the D/A converter 4 and to output the signal to a headphone 6. The CPU 1 has a buffer 2 incorporated therein, and is connected to a manipulating key 10 for a user giving the device a command for various operation.

Please replace the paragraph beginning at page 6, line 9 with the following rewritten paragraph:

9
The controller 9 mounted on the memory card 8, as shown in FIG. 3, sets an active mode A to read out data under a current consumption of 33 mA in response to memory access of data reading. If there is no memory access within a predetermined period of time T, a standby mode S automatically follows to wait for the next memory access at a current consumption of 50 μ A.

Please replace the paragraph beginning at page 6, line 20 with the following rewritten paragraph:

10
FIG. 2 shows a controlling procedure which the CPU 1 executes in data reproduction. An inquiry is made in step S1 as to whether the PLAY key is turned on by a user's manipulation. When the PLAY key is on, the CPU 1 commands the memory card controller 7 to read the data from the memory card 8 in step S2. This sets the memory card 8 in the active mode, to read the predetermined amount of data from the memory card 8 at the bit rate of 8 Mbps. When reading data access (active mode) from the memory card ends and the predetermined period of time T

Q¹⁰ U.S. Patent Application Serial No. 09/745,303

(=5 ms) elapses, the memory card 8 goes into the standby mode.

Please replace the paragraph beginning at page 9, line 5 with the following rewritten paragraph:

Q¹¹ If data is successively read out from a memory card at the conventional bit rate of 128 Kbps in place of the intermittent reading method of the memory card according to the embodiment, the consumed current is a constant 33 mA, so that the power consumption is minimized to 1/17 or less according to the present invention. The increase of the capacity of the buffer 2 of the CPU 1 provides greater effect.

Please replace the paragraph beginning at page 9, line 13 with the following rewritten paragraph:

Q¹² The present invention described is particularly effective for a portable data reproduction device because the intermittent data read out from the memory card enables the device to reduce the power consumption greatly.
